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American Woman's Society of Certified Public Accountants

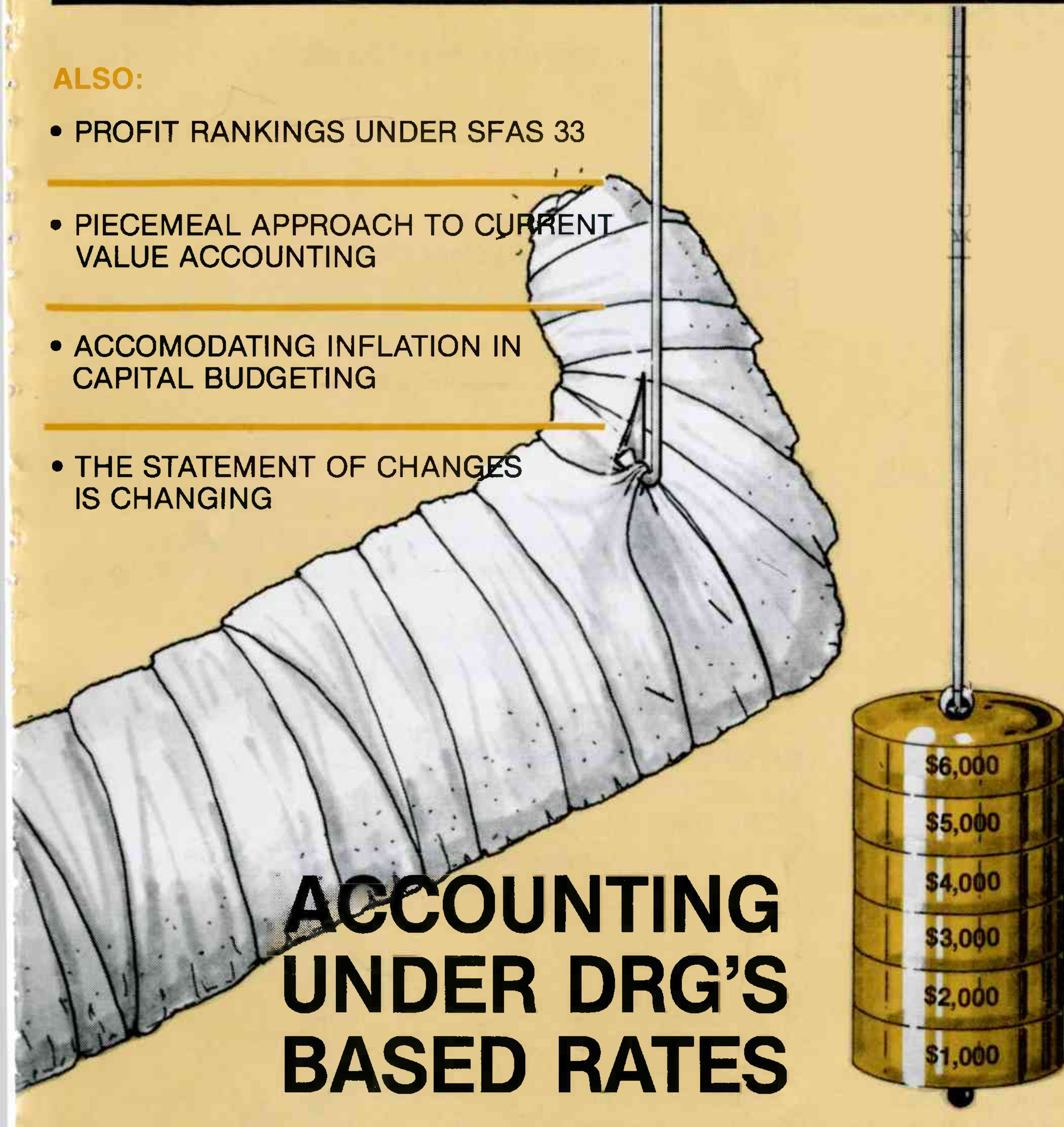
American Society of Women Accountants

The Woman CPA

OCTOBER, 1984 VOLUME 46 NUMBER 4

ALSO:

- PROFIT RANKINGS UNDER SFAS 33
- PIECEMEAL APPROACH TO CURRENT VALUE ACCOUNTING
- ACCOMODATING INFLATION IN CAPITAL BUDGETING
- THE STATEMENT OF CHANGES IS CHANGING



ACCOUNTING UNDER DRG'S BASED RATES

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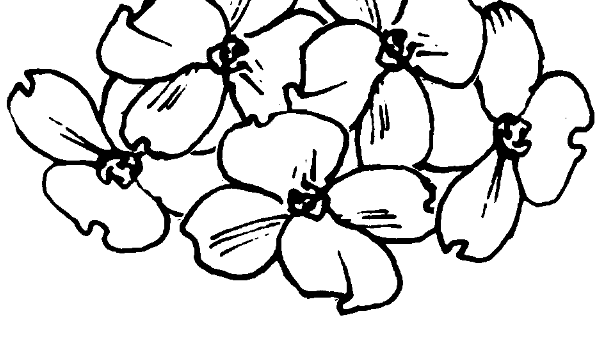

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Cover Illustration by Donna Overberg

Editor's Notes

Bryan Carsberg's 1994

It is a pleasure and a privilege to share with you Bryan Carsberg's thoughts and comments on accounting as it may be practiced ten years from now.

Bryan Carsberg, Arthur Andersen Professor of Accounting at the London School of Economics and Political Science, was selected the American Accounting Association's 1984 Distinguished International Visiting Lecturer in Accounting to visit nine schools in the United States and Canada during the spring of 1984. The University of Toledo was stop number eight on his lecture tour, and thus I had the pleasure of hearing Mr. Carsberg speak.

A member of the AAA, he has published numerous articles and books, including FASB Statement No. 33 written while he served as Assistant Director of Research and Technical Activities at the Financial Accounting Standards Board from 1978 to 1981.

When he was young, the British Broadcasting Company carried a program called "The Reporter from the Past." As a take-off on this idea, Mr. Carsberg decided to call up the "Reporter from the Future" to get an eye witness account of what things might be like ten years from now. With this novel approach he began his predictions.

Imagine it is 1994. The scene is the conference room at the San Antonio Hilton. Sitting around an oval table are forty people from government, industry, et cetera. The Board's (FASB) Director of Research speaks before the group with a foreign accent. He states that relocation of the meeting was needed because the leaders in New York kept their building temperatures at fifty degrees because of the oil crisis in the Middle East.

Computerized data banks have been developed from which investors can learn about their investments. This created a problem for the standard setter in accounting because of a need for highly summarized information to be held in the data banks. Minimum summarized information should be required for the income statement. Many people thought the Board should have considered summarized information much earlier; however, the Board had been reluctant to consider it, having been more concerned with the amount of detail to be included.

A comprehensive set of standards also would be included in the data bank. As an example, the Research and Development Standard is undergoing change. Many of these costs do benefit the company in the future. Soft items should increase in importance as for some companies they constitute a very large item. The increased use of robotics has extended this problem.

Interest in human resource accounting has been reviving. The amounts involved in these intangible assets are considerable.

The Board is considering the publication of two balance sheets, one of which would include "soft" assets. These balance sheets would emphasize the concepts of relevance and reliability which would result in two kinds of reporting. The traditional report would emphasize the *reliability* of the amounts. A new and second kind of report would emphasize *relevance.*

Technical change has been so great that fixed asset lives have changed greatly. Companies are encouraged to provide financial and related information on fixed assets and the effect on the income statement.

The Board's conceptual framework was first formed twenty years ago and at that time was given high importance. The Board developed a comprehensive series of statements several years ago and is now considering a review with the possibility of restating them.

Two main issues are important. The first deals with defining the most relevant asset measurement. Current cost seems to be preferred over constant dollar. It is believed the balance sheet should represent the amount by which the company is better off.

The second issue deals with the definition of earnings. This will be difficult to resolve because of the lack of a clear conceptual guidance as to what belongs in the income statement. Some believe earnings should reflect capital maintenance, while others believe reliability of measurement should be the basis of earnings.

Statement No. 52 seems to be well accepted. However, the 1985 decline of the dollar combined with a renewed energy crisis may cause the Board to recommend inclusion of the translation adjustment in the income statement.

Companies are being asked to publish cash flow forecasts for one year into the future. Several of the Big 7 (no longer Big 8) accounting firms have recommended cash forecasts.

A breakthrough occurred in 1986 regarding big GAAP versus little GAAP. Small companies were exempted from reporting deferred taxes on their balance sheets when the Board voted to exclude non-public companies from this reporting requirement.

Fifteen years have passed since Statement No. 33 was introduced. Statement No. 33 required partial information on current cost and constant dollar adjustments for general price level changes. A comprehensive review disclosed little use was made of the information by analysts and other statement users. The Board, therefore, decided to drop Statement No. 33.

Then, with the increase of inflation in the late 1980's, interest in current cost data renewed. Next month the Board will be considering current cost financial statements and dropping statements prepared on a full cost basis.

And thus ended Bryan Carsberg's prophecy of where the accounting profession may stand in 1994. Ω

Glenda E. Ried

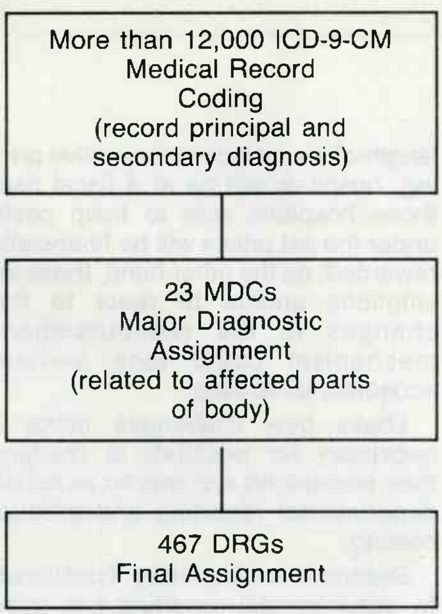
Accounting Under DRGs Based Rates

Medical Reimbursements Based on National and Regional Averages.

By Olga Quintana

During the past few years, costs for hospital care have risen at a faster rate than inflation for the general economy. These rapid increases can be attributed to a variety of factors, including increases in the proportion of the population sixty-five years and older (see Table 1), development of expensive new technologies, and greater accessibility of care. The retrospective payment system, which has reimbursed hospitals for all reasonable costs incurred in providing services to Medicare beneficiaries (as well as beneficiaries of Medicaid and Blue Cross) has come under attack lately as a major contributor to inflation of hospital costs. Since costs could not be determined until the end of the fiscal year, and would in most cases be reimbursed without much question, few incentives were provided for controlling hospital costs. In fact, the system in use up to now may have been more cost-provocative than cost-restraining. However, on September 3, 1982 the Tax Equity and Fiscal Responsibility Act (P.L. 97-248) was signed into law. The act aims at federal savings from the Medicare program, without any reduction in benefits, of $2.8 billion in 1983 and $5.9 billion by 1985. With the passage of the Social Security Amendments of 1983 (P.L. 98-21), the federal government expects to accomplish the TEFRA goal. This means moving from retrospective reimbursement to prospective pricing.

FIGURE 1
DRG Assignment



In essence, under prospective payment, Medicare will reimburse hospitals for inpatient care on the basis of average prices for diagnostic related groupings (DRGs). The law applies to all hospitals except those listed in Table 2.

Diagnosis Related Groups

The DRG concept was first developed at Yale University in the early 1970s, and then revised in 1981. Under the revised DRG system, those patients expected to utilize similar amounts and kinds of hospital resources — e.g., similar laboratory tests, similar therapeutic procedures, similar lengths-of-stay — are grouped into one of 467 categories. The DRG assignment process starts with the coding of the medical record according to the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). The next step is the assignment to a "Major Diagnostic Category" (MDC) according to the principal diagnoses recorded on the medical record. Finally, the patients are classified into categories with similar resource utilization (see Figure 1). These categories are used as the basis for setting prices. The importance of the medical record cannot be overemphasized. For instance, for MDC 5 (Diseases of the Circulatory System) there are 43 DRGs, and each one carries a different weight. Consequently; the assignment to a given DRG will determine the amount of reimbursement. A comprehensive list of all MDCs, DRGs, and their respective weights appears on pages 39876-3886 of the September 1, 1983 Federal Register (see reference 7).

Besides the 467 basic DRGs, there are three additional categories in the federal DRG system. DRG #468 represents discharges with procedures unrelated to the principal diagnosis; these claims will be returned to the hospital by the intermediary for clarification, which will in turn delay cash collections. DRG #469 represents a valid diagnosis not acceptable as a discharge diagnosis, and DRG #470 represents a discharge with invalid data — for example, a DRG #359 ("Tubal Interruption for Non-Malignancy") with a sex entry of male. Since DRGs #469 and #470 represent cases that could not be assigned to a valid DRG, these claims will also be returned to the hospital by the intermediary. Thus, carelessness in the

TABLE 1
Population of the United States, 1970 - 1990 (In 000s)

Year	Total Population	66 and Over
1970	205,052	20,107
1975	215,973	22,696
1980	227,658	25,708
1985	237,000	28,203
1990	247,000	31,072

(Note that while the total population will increase 8.5 percent between 1980 and 1990, the percentage of the population 65 years and older will increase 20.9 percent).

Source: Exhibit I; U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 922, U.S. Government Printing Office, 1982.

TABLE 2
Hospitals Exempt from Prospective Payment Requirements

Psychiatric hospitals

Rehabilitation hospitals

Psychiatric and rehabilitation units of general acute care hospitals

Children's hospitals

Long-term care hospitals (with average length-of-stay of 25 days or more)

Hospitals in U.S. territories

Hospitals already under alternative reimbursement programs in Maryland, Massachusetts, New Jersey, and New York

Veterans Administration Hospitals

Risk-Basis Health Maintenance Organizations (HMOs) and Competitive Medical Plans (CMPs)

Source: *Federal Register*, Vol. 48, No. 171. September 1, 1983, pp. 39755-39759.

medical record will certainly affect the hospital's cash flows.

Management Implications

Prospective pricing will set Medicare revenues at predetermined rates; therefore the hospital accounting system must provide data capable of identifying the difference between selling price per unit of service and actual cost per unit. This will necessarily encourage hospitals to exercise a more efficient management of their resources through controlling the unit costs of services. Management will also be more concerned with monitoring both use of ancillary services, and length-of-stay. Under prospective pricing, hospitals will be at a fiscal risk: those hospitals able to keep costs under the set prices will be financially rewarded; on the other hand, those institutions unable to react to the changes in the reimbursement mechanism could face serious economic difficulties.

These new challenges make it necessary for hospitals to readjust their accounting systems so as to link departmental reporting and product costing.

Departmental Reporting. Traditionally, departmental reporting has used the concept of responsibility accounting, which traces costs and revenues to the various responsibility centers in the organization. This system has been used primarily to prepare Medicare Cost Reports, since Medicare has required that the costs of all nonrevenue producing departments be allocated in a reasonable way to the revenue departments. Under the DRG system, responsibility accounting will remain essential to the management process; in particular, efforts to identify those costs that are controllable will be increased. While some costs are inescapable, others stem directly from management choices. The degree of control depends, of course, on the responsibility level under consideration: costs uncontrollable at one responsibility level may be controllable at some other.

Product costing. Product costing deals with determining the unit manufacturing cost. This information is used for different purposes, such as cost control, budgets, pricing, specific decisions, and general planning and control of operations. The aim of product costing is to provide detailed cost information which can then be analyzed and combined in different ways. It is unlikely that an organization could operate efficiently without an understanding of its cost and their relationship to the aims which it is to serve. But since the methods used for cost collection depend on the types of products and processes under consideration, these methods vary among firms.

The forerunner of the prospective payment system is the New Jersey plan. This plan defines direct patient care costs, those readily associated with output, as variable with volume; and indirect costs, those allocated in order to achieve a total costs per unit, as fixed.

Generally, variable costs are those that change in direct proportion to volume, where fixed costs are those which remain constant over a relevant range. Administrative salaries and depreciation would be examples of costs that cannot be reduced simply because the volume of patient admissions drops. Salaries of temporary personnel and the cost of medical supplies, on the other hand, vary in direct proportion to changes in patient volume. Certain other costs — those which do vary, but not in direct proportion to volume — are considered semivariable.

In the New Jersey DRG system, direct variable costs include those associated with routine nursing care and with the provision of ancillary services, such as laboratory and radiology. Indirect fixed costs include those related to the operations of the fiscal plant, as well as administration. Semivariable costs are those associated with general services such as housekeeping, dietary, linen, etc.; they are allocated to direct or indirect patient care cost centers on a predetermined basis.

Prospective Payment Mechanism[1]

Various factors will be utilized by the Health Care Financing Administration in determining prospective payment amounts. The final rate is a blend of a hospital-specific cost-based portion, and a federal portion with a three-year phase-in period. Moreover, the Federal portion is arrived at by using a mix of regional and national rates (see Table 3). Thus, a hospital with a fiscal year-end of June 30 will be paid for the fiscal year beginning July 1, 1984, a blend made of 75% hospital specific portion and 25% federal portion. The federal portion will be based on a 100% regional rate from 7/1/84 to 9/30/84. However, from 10/1/84 to 6/30/85 the 25% federal portion of the blend will be based on a 75% regional and 25% rate-mix.

Hospital-Specific Portion. The hospital-specific component is derived from the Medicare allowable costs during the base year (the hospital cost reporting year which precedes the year in which TEFRA applies — i.e., the first fiscal year beginning on or after October 1, 1981). These costs include inpatient operating costs, such as those incurred in providing ancillary and special care services, as well as routine operating services. In addition, malpractice costs, indirect medical education costs, FICA taxes (if not previously considered), and non-physician service costs are to be included. Other adjustments to the base year are listed in Table 4.

Once the base-year costs are obtained, three further adjustments are needed. First, a "case-mix index" is removed, in order to reduce differences between hospitals due to

TABLE 3
Prospective Blended Rate

Fiscal Year Beginning on or After October 1	Hospital Specific Portion	Federal Portion		
		Percentage of Total	Regional %	National %
October 1, 1983	75%	25%	100%	—
October 1, 1984	50%	50	75	25%
October 1, 1985	25%	75	50	50
October 1, 1986	0	100	—	100

Source: *Federal Register*, Vol. 48, No. 171, September 1, 1983, p. 39775.

TABLE 4
Adjustments to Base Year

Removal of capital-related costs

Removal of direct medical education costs

Removal of nursing care differential

Removal of routine costs in excess of the limits

Removal of kidney acquisition costs if hospital has a Renal Transplantation Center

Removal of higher costs due to changes in accounting practices in the base year.

Removal of other items that could have caused unusual increases in base year costs.

Source: *Federal Register*, p. 39773.

TABLE 5
Target Rates of Increases

If 12-month Base Year Cost Reporting Period Ends	And First Cost Reporting Period Under PPS-Ends	Updating Factor
September 30, 1982	September 30, 1984	1.13570
October 31, 1982	October 31, 1984	1.13265
November 30, 1982	November 30, 1984	1.12961
December 31, 1982	December 31, 1984	1.12658*
January 31, 1983	January 31, 1985	1.12658
February 28, 1983	February 28, 1985	1.12658
March 31, 1983	March 31, 1985	1.12658
April 30, 1983	April 30, 1985	1.12658
May 31, 1983	May 31, 1985	1.12658
June 30, 1983	June 30, 1985	1.12658
July 31, 1983	July 31, 1985	1.12658
August 31, 1983	August 31, 1985	1.12658

*These updating factors are subject to change depending on changes in the target rate percentages used to compute them. HCFA will publish a quarterly notice in the Federal Register setting forth the percentages and factors to be used for cost reporting periods beginning in the subsequent calendar quarter.

Source: Chart 2, *Federal Register*, p. 39774.

TABLE 6
Adjusted Standard Amounts

	Labor Related	Non-Labor Related
Region 1 (New England)		
Urban	$2,342.75	$638.28
Rural	$2,003.02	$484.24
Region 2 (Middle Atlantic)		
Urban	2,106.03	630.78
Rural	1,993.64	491.11
Region 3 (South Atlantic)		
Urban	2,192.95	584.52
Rural	1,803.89	408.07
Region 4 (East North Central)		
Urban	2,340.95	680.40
Rural	1,959.42	457.10
Region 5 (East South Central)		
Urban	1,990.97	520.25
Rural	1,819.64	381.83
Region 6 (West North Central)		
Urban	2,283.48	605.28
Rural	1,828.58	392.30
Region 7 (West South Central)		
Urban	2,146.37	572.51
Rural	1,762.03	380.42
Region 8 (Mountain)		
Urban	2,108.90	607.69
Rural	1,826.56	426.96
Region 9 (Pacific)		
Urban	2,219.82	711.58
Rural	1,908.93	497.87
National		
Urban	2,206.22	631.69
Rural	1,847.42	416.58

Source: *Federal Register*, p. 39844

case-mix complexities. (This variable was computed for each hospital using 1981 data; a comprehensive list of all providers and their respective case-mix indexes appears on pages 39847-39870 of the September 1, 1983 Federal Register). Second, the amount so obtained is adjusted for outliers — i.e., "cases that have an extremely long length of stay or extraordinary high costs when compared to most discharges classified in the same DRG."[2] The outlier adjustment factor is .943. Its purpose is to adjust the hospital specific portion to exclude additional payments for outliers that are likely to occur in the future. Health Care Financing Administration expects outlier payments of "approximately 6% of the estimated FY 84 total prospective payments."[3] Finally, base-year costs are multiplied by an updating factor, in order to account for inflation (see Table 5).

Federal Portion. The federal component of the prospective payment rate is derived from the calendar year 1981 Medicare Cost Reports. During the phase-in period, this amount will be compounded from one of 18 regional rates — with each of the nine census regions divided into urban and rural areas — and one of two national rates — one urban, one rural. Further, these amounts are divided into labor and non-labor components (see Table 6). During the phase-in period the labor-related portion of the regional standards will be adjusted using the wage index published in the Federal Register. It should be re-emphasized that, in the fourth year, the DRG rate will be based solely on the national average.

Sample Computations

As an example, let us take the case of a patient over age 69 who is discharged from a hospital in Durham, NC, on January 1, 1984, with a principal diagnosis of kidney-urinary tract infections, with comorbidity and/or complications. This patient would fall into DRG #320 — based on his diagnosis, his age, and his complications — which has a weight of .8123. If the hospital's fiscal year ends on September 30, then the blended rate is that for the year beginning October 1, 1983: 75% hospital-specific, 25% federal (see Table 3). Assuming that the base-rate cost per Medicare discharge is $2,800 in North Carolina; the case-mix index for this particular hospital is .9671; and the updating factor is that for the cost-reporting period ending September 30, 1984 (see Table 5).

As can be seen from this simple illustration, the difference in payment ($2,772 vs. $2,459) is due in part to differences in the base-year cost and the case mix between the two hospitals. (It should be pointed out that, since the base year cost is divided by the case-mix index, those institutions with a case-mix index lower than 1.0 will be relatively better off than those with a more complex mix, i.e., greater than 1.0.) In addition, there are differences in the federal portion, due to regional adjustments caused by differences in prices and wages during the phase-in period.

New Challenges

The arrival of a DRG based prospective payment system poses new challenges for hospital management. It forces the merger of clinical and financial data; thus coordination of efforts between the medical/nursing staff, medical records personnel, and the administration becomes imperative. Since knowledge of the specific costs associated with treating a given DRG becomes a must, never before has product costing been so important in the hospital industry. Ω

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NOTES

[1]This section represents a summary of the final regulations which were published by the Department of Health and Human Services - Health Care Financing Administration in the *Federal Register*, September 1, 1983.

[2]See reference #7, p. 39776.

[3]Idem.

Illustration 1

Hospital Specific Portion

Durham, North Carolina

Base Year Cost =	$2,800
Case-mix Index =	.9671
Outlier Adjustment =	.943
Updating Factor =	1.13570
Transition Percentage =	75%
DRG Weight =	.8123

$2,800 x .943 x 1.3750 x .75 x .8123 = $1,889.03
.9671

Federal Portion *(See Table 6, Region 3)*

Labor Related Portion =	$2,192.95
Non-labor related =	584.52
Wage Index =	1.0139 (Federal Register, p. 39874).

[($2,192.95 x 1.0139) + 584.52] x .25 x .8123 = $570.23

Payment Rate for DRG #320 Durham, North Carolina

Hospital Portion	$1,889.03
Federal Portion	570.23
Total Payment	$2,459.26

For comparison, let us look at a similar patient released on the same date the same reporting year, but located in Los Angeles, California:

Illustration 2

Hospital Specific Rate

Los Angeles, California (Additional Assumptions)

Base Year Cost =	$3,200
Case-mix Index =	1.0235

BY Cost x outlier x updating x transition x DRG = Hospital Portion
CMI adjustment factor percentage weight

$3,200 x .943 x 1.13570 x .75 x .8123 = $2,039.94
1.0235

Federal Portion *(See Table 5, Region 9)*

Labor Related Portion =	$2,219.82
Non-labor Related =	711.58
Wage-Index =	1.3037 (Federal Register, p. 39873)

[($2,219.83 x 1.3037) + 711.58] x .25 x .8123 = $732.20

Payment for DRG #320, Los Angeles, California

Hospital Portion	$2,039.94
Federal Portion	732.20
Total	$2,772.14

Olga Quintana, DBA, CPA, *is associate professor of accounting at the University of Miami, Coral Gables, Florida, and is visiting associate professor with the Department of Health Administration at Duke University. She holds a DBA from the George Washington University. She is a member of The Research Triangle Chapter of CPAs, NAA and AWSCPA. She has been a consultant with Arthur Young & Company, The World Bank and The Agency for International Development. Dr. Quintana is conducting research on the implementation of prospective payment and on costing medical procedures.*

Profit Rankings Under SFAS 33

May Affect Channeling of Investments

By Frederick M. Richardson and Betty C. Brown

SFAS No. 33, which requires firms of a specified size to disclose the effects of current cost and constant dollar measuring systems on certain income items is an experiment. The Financial Accounting Standards Board is attempting to find the best method of measuring the impact of changing prices on financial statements. Behind the justification for this action is the implicit assumption that current cost and constant dollar information is useful for decision making purposes.

Statement of Financial Accounting Concepts (SFAC) No. 1 states that the primary objective of financial statements is to provide useful information for decision making purposes. SFAC No. 2 indicates that such information should pass a cost-benefit constraint to be reported. Therefore, if income measured by either a constant dollar or current cost income model cannot be proven useful and cost beneficial for decision making purposes, there would be little justification within the Board's framework for continuing to present this information in financial statements.

The Board was unable to reach a consensus on which of constant dollar, current cost, or historical cost information is the most useful. Because users are familiar with the historical cost model, the Board elected to keep it as the primary income model and present information from the other two income models in supplemental schedules. To date, it has not been shown that any income model provides more useful information than any other income model. On the other hand, it is not logical to supplement or change from the traditional historical cost model unless it can be demonstrated that one or both of the other two income models provides more useful information.

Flesher and Soroosh (1983) indicate that controllers and financial analysts do not believe that SFAS 33-required supplementary data are particularly useful in their current form. Nonetheless, the study participants did "show a strong general support for price-level adjusted financial statements." That study, however, states that only the general usefulness of SFAS 33 data was assessed; apparently no particular decision contexts were used in assessing usefulness.

Madison and Radig (1983) surveyed managements of industrial corporations and report that the preparers of financial statements appear "highly skeptical" about the usefulness of the required disclosures. They further cite the need for users to communicate their needs to the preparers.

The Richardson-Brown study focuses on the usefulness of SFAS No. 33 data from the standpoint of users of financial statements (eg., investors and creditors). Firms are competing for favorable financing terms in today's tight money market. Because profitability ratios are among the variables considered by potential creditors to evaluate a firm's credit worthiness, it is possible that the inflation-adjusted income figures might be useful to such decisions. There is no indication, however, that lenders are using that additional data to evaluate a firm's credit position.

Specifically, because there is competition among firms for additional financing, each firm's relative position with respect to profitability might logically be an important factor in determining the share of available debt financing each will receive. One would anticipate that, if inflation-adjusted data has an impact, firms would at least rank differently using inflation-adjusted measures than they do using historical cost measures.

A more efficient allocation of resources should result from an allocation of funds based on a firm's profitability position of other firms. Therefore, if it can be determined that an inflation-adjusted profitability ratio differs from an historical cost profitability ratio, it may be postulated that one or both of the two alternative income measurement concepts provides a better indication of credit worthiness than does the historical cost model.

Before differences in usefulness among the three income concepts can be measured, it must be determined whether or not the three concepts actually provide different information about a firm, in relation to other firms. Using different income measurement concepts will normally change the numbers on the income statement. Simply changing the numbers, however, does not prove that different information is being provided. The test of the impact of alternative income measures depends on changes in the relative positions of firms that result from the use of different income numbers.

The Richardson-Brown study applies four commonly used profitability ratios to determine if a firm's position, in relation to other firms, changes under different income measurement concepts. Horrigan (1966) states that profitability ratios are among the most useful ratios in the prediction of credit worthiness. Gibson (1982) concludes that the four profitability ratios used in the current study are considered the most important by financial executives. These ratios are: earnings per share (EPS), return on investment (ROI), return on equity (ROE), and net profit margin (NPM). Generally, it appears that firms maintain the same relative ranking under each of the three income measures.

Data Sources

A sample of 99 companies was randomly selected from companies required to disclose inflation-adjusted data in compliance with SFAS 33. The FASB 33 Data Bank, published by Value Line Investment Company, contains the inflation-adjusted data. The historical cost data were extracted from the industrial COMPUSTAT tapes, published by Standard and Poors.

Data Analysis

Questions that were addressed in the current study are as follows:

A. Do firm profitability rankings differ among the three income measures (constant dollar, current cost, or historical cost) using each of the four profitability ratios?

B. Do firm profitability rankings differ among the four ratios using each of the three income measures?

The test statistic used to answer these questions is the Kendall Coefficient of Concordance (W), a non-parametric measure of the degree of association among the three income measurement concepts.

Companies were randomly selected from the entire population of nonfinancial companies listed on both the FASB 33 Data Bank and the industrial COMPUSTAT tapes. The four profitability ratios were computed for each firm under each measurement concept. Firms were then ranked by each ratio under each measurement concept. Data were inspected for reasonableness and, as expected, the ratios computed using the inflation adjusted figures were smaller than the historic cost figures (inflation-adjusted figures are lower).

The degree of agreement among the three measurement concepts is reflected by the degree of variance among the n sums of ranks. The Coefficient of Concordance, W, is the function of that degree of variance, and is calculated by:

$$W = \frac{12S}{k^2(n^3 - n)}$$

The range of W is $0 \leq W \leq 1$, where 0 represents no agreement and 1 means perfect agreement.[1]

The observed statistic used to assess probability and significance level is approximately distributed as a chi-square with n – 1 degrees of freedom in accordance with the following relationship:

$$\chi^2_{obs} = \frac{12S}{kn(n+1)}$$

$$= k(n-1)W \sim \chi^2(n-1),$$

when substituting W from the above definition into the equation.

The W statistic was also computed for all four ratios ranked on each of the three income models to determine if there is a difference in variation among the ratios under alternative measures.

Results

Research question A was addressed by testing for no agreement in ranking among the ratios under the different income models. The test showed that rankings are the same at a 0.001 level of significance. Therefore, it is reasonable to conclude that rankings do not change in the aggregate. On the other hand, the test results did not indicate perfect agreement among the four ratios; this is a necessary condition to conclude that the rankings of individual firms do not change. Test results are summarized in Table 1.

The results of the test of agreement between the four ratios ranked on each of the three income measures (question B) are summarized in Table 2. The test shows agreement at the 0.001 level of significance. It should be noted, however, that the agreement among the four ratios computed using the inflation-adjusted models is much

TABLE 1

Degree of Agreement Among Income Measures

Ratio	W	²obs	C.V. 0.001
Return on Investment	.7548	221.91	149.45
Return On Equity	.7780	228.73	149.45
Net Profit Margin	.7616	223.91	149.45
Earnings per Share	.7669	225.47	149.45

Note: C.V. = Critical Value with 98 degrees of freedom

TABLE 2

Degree of Agreement Among Ratios

Income Model	W	²obs	C.V. 0.001
Historical Cost	.6870	269.30	149.45
Constant Dollar	.9275	363.56	149.45
Current Cost	.9365	367.50	149.45

Note: C.V. = Critical Value with 98 degrees of freedom higher than the historical cost model. Almost perfect agreement is indicated under constant dollar and current cost models. The W value is smaller under the historical cost model, indicating more variability among rankings using the traditional model.

In addition, the test conclusions are supported by Spearman Rank Order Correlations. The ratios computed using the constant dollar income figures are highly correlated with one another, as are the ratios computed using the current cost figures. On the other hand, the historic cost ratios are generally not as highly correlated, indicating less agreement among the rankings than among the two inflation-adjusted models.

Conclusions

This study investigates whether or not there are relative differences in firm rankings based on various profitability ratios measured within the three income measurement concepts: historical cost, constant dollar, and current cost. The magnitude of the differences is not reflected in the results. Nonetheless, the size of differences may subsequently prove to be an important variable in the allocation of resources, hence may prove to be a fruitful area for future study.

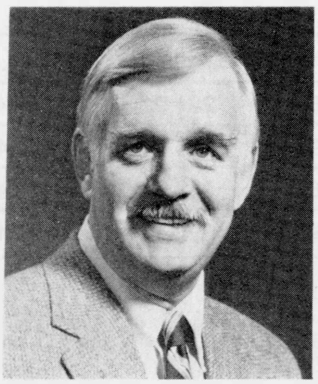
Ninety-nine randomly selected companies were ranked according to four profitability ratios, using the three income figures required to be reported in compliance with SFAS 33. A test of concordance (agreement) among the rankings was used to determine if a firm's relative position changed significantly under the alternative income models. It was concluded that, in the aggregate, relative positions did not change significantly using the alternative income measures. On the other hand, the results did not indicate perfect agreement among the rankings, either.

The result that perfect agreement for companies in the aggregate does not exist implies that specific companies may change rankings using different income measures. The impact on specific companies needs to be investigated, as well as the usefulness of the different measurement concepts.

Apart from the rankings of the ratios, usefulness may also be affected by the relative sizes of the ratios. That is, resources may be channeled into alternative investments simply because the adjusted ratios prove to be quite small in comparison to the historic cost ratios.

Because SFAS 33 has only been in effect since 1980, the usefulness of the alternative income measurement models may not be determinable until some future date. Moreover, because the income presentations that comply with the standard are so recent, it is logical to argue that financial statement readers are still learning to use the additional information. An adequate evaluation of the usefulness of the alternative income presentations may therefore not be possible until the learning cycle is much further along.

If and how the FASB ultimately decides changing price data should be disclosed will depend on the strength of any perceived usefulness to decision makers. Further investigtion in this area thus appears warranted. Ω



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NOTE

[1]The terms in equation (1) are derived as follows; k = number of sets of rankings; n = sample size; S = sum of squares of the observed deviations from the mean of Rj, that is, $S = \sum_{j=1}^{n} R_j^2 - (\sum_{j=1}^{n} R_j)^2/n$; Rj = sum of ranks in the jth column of the kxn table of rankings, j = 1, 2, ..., n; $(1/12)k^2(n^3 - n)$ = maximum possible sum of the squared deviations (perfect agreement).

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The Piecemeal Approach to Current Value Accounting

Evolutionary Abandonment of The Traditional Accounting Model?

By Roland L. Madison

Is 1984 to be the year of several revolutionary developments in our traditional accounting model? Many scholars of accounting history would, no doubt, accept this as a possibility.

During the past decade, many significant changes, albeit somewhat subtle at times, have been made in the traditional financial reporting model being used in the United States. This article does not purport to explore and discuss all of the potential ramifications the title may imply. It does, however, attempt to make the financial community aware of the significant changes in the traditional model that have developed over the past decade, and even more important is an awareness of the potentially radical change in our accounting model that may be on the horizon. The significant change is primarily a result of the recently issued *Invitation to Comment* (FASB, 1983) that is related to Statement of Financial Accounting Standards No. 33, "Financial Reporting and Changing Prices" (FASB, 1979) and the newly proposed *Statement of Financial Accounting Concepts*, "Recognition and Measurement in Financial Statements of Business Enterprises," (FASB, 1983). First, however, it is appropriate to examine the events that set the stage for these potentially major changes in the traditional reporting model.

Generally Accepted Accounting Principles: A Consensus

A definitive statement is necessary before exploring the changes that are pertinent to our accounting model. Most accounting scholars would concur that *generally accepted accounting principles* (GAAP) includes a set of conventions, principles, and procedural rules adopted by consensus or by promulgation from professional organizations or by government edict at a point in time (APB Statement No. 4, 1970). Furthermore, this consensus of opinion changes in response to changing economic, social, political conditions, development of new knowledge, advancement of technology, and demands made by users for more relevant financial information (APB Statement, No. 4). Accordingly, it holds that generally accepted accounting principles change as our business environment and needs for information change.

Posture for Overall Change Becomes Evident

An obvious presumption underlying the preceding comments is that the consensus of what is deemed relevant information [e.g., that which has the ability to make a difference (improvement?)] in the decision-making process according to the Statement of Financial Accounting Concepts No. 2, (FASB, 1980) has, in fact, changed — and the desire for the change has "substantial authoritative support."

Given these thoughts, the next part of this discussion presents several of the early proposals to alter dramatically the transactions-based historical cost model to a current- or fair-value model and then, lacking success, began an evolutionary process toward this end.

As to the terms "current-value" and "fair-value," no lengthy attempt is made to distinguish between them. It is suffice to say that often their valuations, and thus their semantic meanings, are equivalent enough to use the terms concurrently, if not interchangeably. Thus, this point of debate merits no further elaboration within the scope of this article.

Bypassing the early proposal of Sweeney (*Stabilized Accounting, 1936*), we had several relatively "modern" proposals put forth to greatly modify or to even discard the traditional accounting model. The American Institute of Certified Public Accountants once sponsored a research study (*Accounting Research Study No. 6*, "Reporting the Financial Effects of Price-Level Changes," 1963) that suggested various indexing approaches to provide supplementary material to the traditional historical-cost based primary financial statements. A few companies experimented with this approach on a voluntary basis in the 1960s but discarded it.

The American Accounting Association (AAA) followed shortly thereafter with *A Statement of Basic Accounting Theory* (ASOBAT, 1966) which called for multi-column and multi-valued financial statements (historical- and current-cost). This was quite a change from the AAA sponsored monograph by Perry Mason (1956) that called for a general price-level form of financial statements versus the current-value approach suggested in ASOBAT.

In brief, none of the preceding proposals obtained "substantial authoritative support" via a consensus toward a change in the basic accounting model.

The Development of an Evolutionary Approach

Most of the proposals were rejected by the business community and by the accounting profession as being too radical a departure from the time-tested transactions-based historical cost model. Thus, it appears to this writer that the authoritative committees of the accounting profession, greatly stimulated by the public sector (SEC) and through litigation, began what may be described as a piecemeal evolutionary approach to adopt a current- or fair-value based accounting model.

It is debatable when this change in methodology (from wholesale revision to piecemeal adoption) and emphasis on current- and fair-value accounting began, but a reasonable approximation would be the early 1970s. As noted in the preceding paragraph, pressure from the SEC, criticisms of the Accounting Principles Board, and major cases of litigation against accountants made the profession very vulnerable for changes that were presented as improvements of the reporting model (see, for example, *The Woman CPA*, January 1982 issue, pp. 17-20).

Early proposals began an evolutionary process toward current-value accounting.

As a point of clarification, the authoritative pronouncements mentioned in this section are generally quite technical and may be subject to an extended analytical discussion. The purpose of their identification is neither to explain their mechanics nor to debate their points of merit. No doubt many would agree that some of the changes do have a legitimate basis — conceptually and pragmatically. Instead, its purpose is to illustrate to the reader that a concentrated evolutionary effort was being made in some areas of financial reporting to develop a current- or fair-value oriented model with a corresponding departure from the traditional financial reporting model (as described primarily in APB Statement No. 4) which has been accepted by consensus as providing sufficient information for decision-makers.

In APB Opinion 18 (1971), the Board specified when a departure was preferred from the cost method of accounting for investments in common stock to the equity method of income recognition. In the latter approach the investor adjusts the carrying amount of the investment account to recognize a proportionate share of the earnings or losses of the investee prior to their distribution to the investor entity. This is a departure from the legal (cost) approach.

While the Board believed the market value method provided the best presentation of investments in some situations, it concluded that further study was necessary before the market value method was extended beyond current practice (APB Opinion 18, para. 9).

The implication given by the Board in its discussion was that the equity method was representative of the investor's degree of fair value and control over the investee and further movement toward the market value approach was not presently feasible.

Later that year, the Board issued APB Opinion No. 21 which required an imputation of interest on various receivables and payables. While the opinion appeared to focus on the proper determination and disclosure of interest charges, its effect upon asset valuation unfortunately did not demand equal attention (perhaps due to "bottom line" focus on income).

The asset valuation was essentially subject to either the market value of the instrument or the fair value of the asset if such was readily determinable. If it was not, then the appropriate "market rate" of interest was applied to the face of the debt instrument thereby backing into the "market value" of the asset. Obviously if the former item was not objectively determinable (the interest rate), then the resultant market value of the asset was also distorted.

Selected current replacement costs may find their way into the financial statements.

The push toward current- or fair-value accounting continued the next year (1972) when the Board extended and modified the applicability of ARB No. 43 (Chapter 13B) to measure compensatory stock plans issued to employees at the quoted market price of the stock (APB Opinion 25, "Accounting for Stock Issued to Employees," 1972). The accrual of such market value as a cost of executive compensation before the stock is issued is an acceleration of the realization process using market value as a measure of the executive's cost (and surrogate for market value) to the entity.

The final definitive push by the Board before their transition of the standards setting function to the Financial Accounting Standards Board was APB Opinion No. 29 ("Accounting for Nonmonetary Transactions"). In brief:

> *The Board concludes that in general accounting for nonmonetary transactions should be based on the fair values of the assets (or services) involved which is the same basis as that used in monetary transactions (APB No. 29, para. 18).*

The Board also discussed various manners of determining "fair value," (para. 25) and appropriate alternative treatments when that could not be done.

FASB Continues the Pattern — And Accelerates

While SFAS No. 12 (lower of cost or market for marketable equity securities) and a number of other statements issued by the Board could be discussed in the evolutionary process, the most striking changes have been Statements 8 and 52, dealing with foreign currency translation, Statement 33 that considers financial reporting and changing prices and Statement 70 which amends certain price-level disclosures required by SFAS 33 when foreign currency translation is involved.

Statement Nos. 8 and 52 have a direct impact upon our basic financial reporting model for those entities that are active internationally. Translation gains and losses (translation adjustments) resulting from converting foreign entities' statements to the U.S. reporting model were initially passed through the income statement (SFAS No. 8) although no transfer of resources had occurred at the statement date.

This caused great fluctuations in reporting earnings although no real increase or loss in the value of the asset or liability had occurred. SFAS No. 52 excluded these exchange rate fluctuation adjustments that surfaced at consolidation (statement conversion) from income determination and required these items (both gains and losses) to be accumulated as a separate part of consolidated equity until the liquidation and subsequent realization of the investment in the foregin entity occurred.

However, SFAS No. 70 required that unhedged transaction gains and losses (denominated in the nonfunctional currency) reflect current market rate changes and be included in net income. Thus a portion of the current-value (exchange rate) remained as an element affecting the primary financial statements of the basic model.

The Board continued their posture in the evolutionary development of a current-value model when they incorporated the market-value fluctuations of pension plan assets in the measurement of current pension costs and the presentation of the net pension obligation on the balance sheet (FASB, November, 1982). One disenchanted CFO said:

> *The FASB's pronouncements over recent years reveal a clear movement toward using changes in balance sheet values to determine periodic earnings (Buxbaum, 1983).*

However, as stated initially in this article, the Board issued two documents late last year that may greatly accelerate the piecemeal adoption of a current value mode. These documents demand close attention.

SFAS 33: The 'Great Experiment' Fails — But Is It Dead?

The first document was identified as the *Invitation to Comment* on *Supplementary Disclosures about the Effects of Changing Prices* (FASB December 27, 1983). This *Invitation to Comment,* which relates to *FASB Statement 33* (1979), takes on more relevance to the gradual adoption of a predominately current-value model, when it is coupled with certain ground-breaking avenues opened by the second document, previously identified as the proposed *Statement of Financial Accounting Concepts* (Exposure Draft) titled "Recognition and Measurement in Financial Statements of Business Enterprises" (FASB, December 30, 1983).

The overall constructive style and thrust of the *Invitation to Comment* virtually begs for some positive statement about the utility of the current-value and constant-dollar disclosures required by FASB Statement 33 that may somehow be salvaged by the Board. Conjecture, with the wisdom and logic provided by hindsight of the piecemeal moves that have occurred over the past decade, may suggest that selected current replacement costs and holding gains and losses extracted from Statement 33 may find their way into the primary financial statements through the proposed "comprehensive income" vehicle being developed by the Board.

Certainly for the present, this potential development must be halted. It simply defies consistency with the conceptual framework project, whose integrity must be protected if we are to maintain the standard-setting function in the private sector.

As noted in the *Invitation to Comment* by the Board, research projects by Berliner (1983) and Norby (1983) showed either "limited use of Statement 33 data" or "little systematic use" by financial analysts and portfolio managers. Another widely publicized study by Beaver and Landsman (FASB, 1983) strongly tends to refute the possibility that a more efficient allocation of scarce resources would result from Statement 33 data. They found that security prices from 1979 through 1981 were more highly correlated with historical cost data and earnings than with either constant-dollar or current-cost data. Another study covering the same time period was directed to senior financial management who are the preparers of Statement 33 data. This group, which the Board said would be a major user and beneficiary of such information (SFAC No. 1, 1978), virtually rejected any utility derived from Statement 33 data (Madison and Radig, 1983).

Given an impartial reading, the findings of these studies should preclude the integration of any current-value attributes as used in Statement 33 from becoming an element of income determination in our financial reporting model.

A dramatic change may be expected in the traditional reporting model.

The business community, however, should recall that this Statement was issued by the Board under direct pressure from the SEC when former Chairman Williams told many accountants (Denver, August, 1978) to look at inflation accounting models of other countries and then to move quickly. The SEC used Accounting Series Release (ASR) No. 190 (requiring current replacement cost value for inventories and plant assets) and Reserve Recognition Accounting (RRA) for the oil and gas industry as a stimulus (a threat in pragmatic terms) to elicit action from the private sector through the FASB.

Thus, given the historical development of Statement 33 combined with the Concepts Statement (Exposure Draft) on recognition and measurement, it is still possible that the Board plans to introduce some form of current-value measurement when reporting the results of operations of a business entity.

In the Concepts Statement (ED), the Board proposes to portray the results of operations in a combined "Statement of Earnings and Comprehensive Income." This vehicle may be reduced to its two components as follows: the first portion is an "earnings statement" that is based primarily upon historical cost and exchange transactions while selectively using the four exception measurement attributes of replacement cost, current market value, net realizable value and present value in certain instances when they are deemed more relevant or are a more reliable measurement attribute. The Board does not stop here. The "cumulative effect of certain accounting changes" which are presently shown as catch-up adjustments on the traditional income statement and changes in the market values of investments in non-current marketable equity securities plus foreign currency translation adjustments that are presently displayed as direct changes in owner's equity on the balance sheet will be components of the second portion of operations labeled as "comprehensive income." This term is defined as a broad measure of the effects of transactions and *other events* on an entity, comprising all recognized changes in equity during a period except owner investments and distributions to owners. (SFAC Exposure Draft, p. 13).

Exactly what is this strange creature proposed by the Board? It seems to be a cross-breeding of the current operating performance income statement, with the "earnings" portion based primarily upon realized exchange transactions, followed by elements of the "all-inclusive model" of income reporting, and expropriating unrealized value changes from the equity section of the balance sheet.

In the Concepts Statement, the Board does not preclude the recognition of undefined market value increments that exceed cost based exchange-transactions and other price changes as element of comprehensive income. Furthermore, the Board states that while the "earnings" portion is nearly equivalent to our concept of realized "income," nothing precludes the evolutionary change of financial items being moved from an element of comprehensive income, which is predominately comprised of unrealized market and price changes, into the more traditional realized "earnings" portion of the operations statement.

Summary and Conclusion

Empirical evidence discussed in recent articles suggests that the information required by SFAS 33 is not consistent with the primary objective of financial reporting; that is, in assisting the decision-maker "in assessing the amounts, timing, and uncertainty of prospective net cash inflows to the related enterprise" *(Statement of Financial Accounting Concepts No. 1, 1978, pp. 17-18).* Empirical research also questions the degree to which Statement No. 33 has the requisite qualitative characteristics of "relevance and reliability" that financial information must possess to make it useful (see *Statement of Financial Accounting Concepts No. 2, 1980*).

Given the piecemeal evolutionary progress to date coupled with the supposedly "experimental" status of SFAS No. 33 in providing supplemental information to the primary financial statements that is supported by SEC stimulus, and perhaps with the recognition and measurement exposure draft recently issued, we may expect a dramatic change in the traditional reporting model.

All interested parties in the financial community must become aware of these developments and proposals for rather dramatic change that may be forthcoming. To maintain the credibility for retention of the accounting standard setting function in the private sector, we must see that any proposal is consistent with the conceptual framework project.

Such proposals, regardless of their approach — piecemeal or otherwise — must be evaluated in terms of the following question. Does the change substantively demonstrate a significantly material improvement in the decision-making usefulness of our financial reporting model? Some outspoken practitioners feel the Board offers nothing to meet this basic justification for change (Gerboth, 1984). However, our evaluation of the Board's proposals, whether they are concurrence, complete disagreement, or qualifications, must be presented to the Board in an informed manner.

Evolution, as a natural reaction to meet a definite need, is acceptable and should be expected. However, the potentially significant modifications that are proposed for a powerful and time-tested model should be challenged. It is hoped that this discussion will make our colleagues in business and academia aware of the potential for change and improvement that we may help develop. Remember that generally accepted accounting principles are determined by consensus, and that the business community and its accounting firms contribute a major influence in the determination of that consensus.

A uniform opinion by these groups, in any posture, may require the governmental pressures being placed upon the Board to be carefully evaluated and will no doubt influence the future of our financial reporting model. Ω

See supplement on page 33.

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Accommodating Inflation In Capital Budgeting

Some Empirical Survey Evidence

By Imogene A. Posey, Harold P. Roth and Norman E. Dittrich

During the last decade, inflation affected business in many areas ranging from external financial reporting to internal decision making. For example, in the area of financial reporting, the Financial Accounting Standards Board (FASB) in September 1979 issued Statement of Financial Accounting Standard (SFAS) No. 33, *Financial Reporting and Changing Prices.*[1] This statement requires certain large publicly-held companies to present constant dollar and current cost information as supplementary disclosures in their annual reports. During this same time, many writers addressed the concern of inflation's impact on the decision-making processes.[2] This paper presents some empirical data indicating whether and in what manner managers actually use inflation data in their decision-making processes.

Specifically, this paper reports the results of a survey determining whether managers use SFAS No. 33 data in internal decision making, and whether they have adjusted their capital budgeting techniques for inflation. A determination that managers use SFAS No. 33 data for internal decision making adds justification to the reporting requirements of that statement. Failure of management to use the data, however, might indicate a usefulness limited to external reporting purposes; thus requiring the FASB to reassess the cost-benefit ratio of SFAS No. 33 when determining whether to continue the requirements. Since the FASB is currently studying the continued requirement of SFAS No. 33, this survey's results should aid the evaluation of the data's overall utilization.[3]

The impact of inflation on capital budgeting techniques was chosen for this study because it was assumed that capital budgeting techniques are used in most companies and, therefore, related company personnel should be familiar with the analyses used by management when making these important decisions. In addition, many writers have urged that inflation be incorporated into capital budgeting models.[4] For these reasons, capital budgeting techniques were selected as a representative management analysis indicating whether managers are in general adjusting for inflation in their decision-making processes.

The Sample

To determine the impact of inflation on capital budgeting, questionnaires were sent in November 1982 to the chief financial officers of 500 companies stratified by size and type of business.[5] The size strata consisted of large firms in the Fortune 1000 industrials, Fortune 50 banks, Fortune 50 retailers, Fortune 50 utilities, and Fortune 50 transportation companies; and smaller firms selected from companies listed on COMPUSTAT tapes. Equal size samples of large and small companies were selected in each industry class, i.e. 150 companies were sampled from each industrials group and 25 companies from each of the other business classes.

The chief financial officer of each company was asked to delegate completion of the questionnaire to someone within the company knowledgeable of the firm's capital budgeting process. Although individuals were assured that their responses would remain anonymous, questionnaires were coded to facilitate grouped analysis and follow-up procedures. One-hundred sixty-eight questionnaires were completed and returned, resulting in an overall response rate of 34 percent. As expected, the response rate varied among strata. Although some respondents failed to answer all questions, the following analyses are based on 168 substantially completed questionnaires with the number of no responses being noted where applicable.

Impact of SFAS No. 33

To determine the perceived impact of SFAS No. 33 requirements on management decisions, respondents were first asked whether their companies are required to report the data specified by the statement. Responses indicate that 126 companies (75 percent) are required to report under SFAS No. 33, 39 companies (23 percent) are not required to report, and three companies (2 percent) did not respond. Since three of every four companies responding to this survey must present SFAS No. 33 inflation adjusted data in their annual reports, the potential for utilization of the data by management is significant among the firms sampled.

To determine the impact of SFAS No. 33 reporting requirements on management decisions, respondents were asked whether the data had heightened their awareness of the impact of inflation on reported earnings, had heightened the awareness of operating managers of the impact of inflation, and whether the data are incorporated into any significant management decision analyses. Responses are shown in Table 1.

Respondents to the questions in Table 1 indicate that SFAS No. 33 data have heightened their awareness of the impact of inflation more than they believe it has heightened the awareness of operating managers. Although over half responded that the data had not increased their awareness, almost half reported that it had. This might be viewed as supporting the requirements of SFAS No. 33, since almost half reported that it had an impact. On the other hand, the large number failing to perceive an impact could indicate a need for exploring more comprehensive requirements, variations in the data content, or even techniques for expanding users' comprehension of the data's significance.

Other responses shown in Table 1 indicate that SFAS No. 33 data have not heightened most operating managers' awareness of the impact of inflation nor is the data used very much in management decision analyses. Over 85 percent of the respondents answered no to both questions, indicating that the data are not used significantly by most companies in the decision-making processes.

Although SFAS No. 33 data are apparently not being used for internal decision making, other inflation data may be developed and used in specific decision areas such as capital budgeting.

Inflation and Capital Budgeting

Capital investment analysis is one area where managers need to consider the impact of inflation in decision making. To determine whether adjustments for inflation are being considered in this area, respondents were asked whether their companies adjust for inflation in payback period (PBP), net present value (NPV), and internal rate of return (IRR) capital budgeting techniques.

Payback Period Analysis

Payback period is one of the most popular methods for analyzing capital investments. This method measures the length of time in years it takes to recover the initial investment. Although the traditional PBP calculation does not consider the investment's profitability or the time value of money, it is often used as a supplementary technique in conjunction with NPV and IRR methods. In this survey, only 2 percent of the respondents used PBP as their sole capital budgeting method. However, 65 percent used PBP in conjunction with other methods.

The PBP method can be adapted to include the impact of inflation by shortening the minimum acceptable payback period. To determine whether companies are making this adjustment, respondents were asked if they offset the effect of inflation by shortening the required payback period. The possible responses were: not used, not used now but anticipate using soon, used as a recently adopted practice, or used for some time as an established practice. Responses from companies using the PBP method are shown in Column 1 of Table 2.

Column 1 data in Table 2 show that a total of 41 companies or 34 percent of those using PBP analysis shorten the required payback period to accommodate the effect of inflation. Thus, a majority of the companies (60 percent) do not use this method to accommodate inflation in their analyses. Eight (7 percent) of the companies using PBP failed to answer this question.

Net Present Value Analysis

The second capital investment technique included in this survey was NPV analysis. This method reflects the time value of money and, therefore, is generally considered superior to PBP analysis. The NPV method discounts a project's expected future cash flows using a minimum discount rate to determine whether the investment is acceptable. Of the 168 companies responding to this survey, 117 (70 percent) reported using the NPV method.

To accommodate inflation in NPV analysis, the discount rate can be increased by an inflation factor. To determine whether companies make this adjustment, respondents were asked whether they increase the discount rate used to offset the effect of inflation. Possible responses were the same as those for the question regarding shortening the payback period. Responses for the 117 companies using the NPV technique are shown in Column 2 of Table 2.

These data show that 66 (56 percent) of the companies using NPV analysis do increase the discount rate either as a recently adopted, or an established practice. However, 49 or 42 percent of the companies using NPV analyses do not use this method to adjust for the effects of inflation.

Internal Rate of Return Analysis

Use of IRR analysis for capital investment decisions determines the rate of return that equates the present value of expected future net cash inflows to the cost of the investment. Like NPV analysis, IRR analysis

TABLE 1
Perceived Impact of SFAS No. 33 Data

Survey questions	Yes Number	Yes %	No Number	No %
Have the requirements of SFAS No. 33 heightened your awareness of the impact of inflation on reported earnings?	63	48	67	52
Have the requirements of SFAS No. 33 heightened the awareness of operating managers of the impact of inflation?	20	14	122	86
Are the data generated for SFAS No. 33 reporting requirements used for any significant management decision analyses?	11	8	125	92

NOTE: These numbers do not add to the 126 companies required to report SFAS No. 33 data. Some companies, however, may voluntarily report or develop the data and, therefore, all responses are included in this table.

reflects the time value of money. Acceptable projects are determined by comparing the calculated rate with a minimum acceptable rate. Inflation can be included in IRR analysis by increasing the minimum acceptable rate of return. Column 3, Table 2 shows responses of the 130 companies that use the IRR technique regarding their use of an increased minimum acceptable rate of return to accommodate the effect of inflation.

Data in Column 3, Table 2 show that 76 (59 percent) of the 130 companies using IRR techniques increase the discount rate to include the effect of inflation. However, more than a third of the companies surveyed still do not use this adjustment for accommodating inflation in IRR analysis.

Restatement of Cash Flows

In addition to the above methods for offsetting inflation in the use of PBP, NPV, and IRR techniques, the impact of inflation can also be included in capital investment analyses by restating cash flows from nominal (historical) dollars to constant dollars (i.e., dollars of constant purchasing power). To determine whether companies are making this adjustment, respondents were asked whether cash flows originating from revenues, expenses, and residual values (or disposal costs) are restated from nominal to constant dollars. Possible responses were: not used, not used but expect to use soon, used as a recently adopted practice, or used as an established practice. Table 3 shows responses to this question.

Data in Table 3 show that most of the companies do not restate cash flows from nominal to constant dollars in capital investment analyses. Over 60 percent of the companies adjust neither revenues, expenses, nor residual values to offset inflation's impact.

Analyses of Combined Responses

Analyses of combined responses related to inflation adjustments in all capital budgeting techniques indicate that many companies include inflation in their capital investment analyses especially when NPV and IRR methods are used. Table 2 shows that over 55 percent of companies adjust for inflation by increasing the discount rate in NPV analysis and increasing the

TABLE 2
Number and Percent of Companies Using and Adjusting Specific Capital Budgeting Techniques For Inflation

	(1) Shortening Payback Period		(2) Increasing Discount Rate in NPV Analysis		(3) Increasing Minimum Rate in IRR Analysis	
Responses	Number	%	Number	%	Number	%
Not Used	69	57	46	39	44	34
Not used now but anticipate using soon	3	2	3	3	7	5
Total not using adjustment	72	60*	49	42	51	39
Used as a recently adopted practice	8	7	18	15	18	14
Used as an established practice	33	27	48	41	58	45
Total using adjustment	41	34	66	56	76	59
No Response	8	7	2	2	3	2
Total using capital budgeting technique	121	101*	117	100	130	100

*Due to rounding

TABLE 3
Number and Percent of Companies Restating Cash Flows For Inflation in Capital Budgeting Techniques

	Revenues (Cash Inflows)		Expenses (Cash Outflows)		Residual Values or Disposal Costs	
Response	Number	%	Number	%	Number	%
Not Used	104	62	101	60	111	66
Not used now but anticipate using soon	4	2	4	2	4	2
Total not using adjustment	108	64	105	62	115	68
Used as recently adopted practice	11	7	11	7	7	4
Used as an established practice	45	27	48	29	40	24
Total using adjustment	56	33*	59	35*	47	28
No response	4	2	4	2	6	4
Total respondents	168	99*	168	99*	168	100

*Due to rounding

TABLE 4

Number and Percent of Companies Not Adjusting For Inflation in the Capital Budgeting Techniques Used

No. Using Related Analyses	**Related Adjusting Techniques**	**Companies Making Neither Adjustment Number**	**%**
121	Shortening payback period and adjusting revenues to constant dollars	45	37
117	Increasing NPV discount rate and adjusting revenues to constant dollars	34	29
130	Increasing IRR minimum rate and adjusting revenues to constant dollars	32	25

TABLE 5

Number and Percent of Companies Employing Sensitivity Analysis in Capital Budgeting Techniques

Response	**Number**	**%**
Not used	83	49
Not used now but anticipate using soon	9	5
Used as a recently adopted practice	22	13
Used as an established practice	47	28
No response	7	4
Total	168	99*

*Due to rounding

minimum acceptable rate of return in IRR analysis. In addition, Table 3 shows that over 30 percent of the companies restate nominal dollar revenues and expenses to constant dollar revenues and expenses either as a recently adopted or a long-time practice. Since either method may be used to accommodate inflation, the number of companies not adjusting for inflation would be indicated by those that responded "not used" or "not used now but anticipate using soon" to both questions. Table 4 presents the results of this tabulation for adjusting the minimum acceptable criteria in PBP, NPV, and IRR methods, and restating revenues from nominal to constant dollars. The results for restating cash flows from expenses and residual values were very similar to revenues and thus are not shown in Table 4.

Data in Table 4 show that 45 or 37 percent of the companies using paycheck period analysis do not adjust the PBP for inflation. However, less than 30 percent of the companies using NPV and IRR methods employ neither adjustment. Thus, overall a majority of the companies recognize the impact of inflation on capital budgeting and include it in their analyses.

It should be emphasized that the data in Table 4 are not simply a summation of the figures in Tables 2 and 3. Table 4 is based only on the companies that report using a specific capital budgeting technique, while the data in Table 3 include all 168 respondents. Thus, the 37 percent of the companies who neither shorten the payback period nor restate revenues from nominal dollars to constant dollars is based on the 121 companies using the PBP method. Similarly, the other data in Table 4 is based on 117 and 130 companies that, respectively, used the NPV and IRR methods.

Since future inflation rates are not known, the appropriate inflation estimate to be included in capital investment analyses is subject to uncertainty. Consideration of this uncertainty can be incorporated in the analyses through the use of sensitivity analysis. Simply stated, sensitivity analysis determines the amount of change in key variables necessary to reverse the implication (i.e. acceptable to unacceptable) in quantitatively based decision analyses.[6] To determine whether companies are using this technique, respondents were asked if they employ sensitivity analysis to determine the potential effects of various assumed inflation rates on project analyses. Responses are shown in Table 5.

Table 5 data show that over 40 percent of the companies use sensitivity analysis either as a long-time or recently adopted practice. However, almost 55 percent of the companies do not currently use sensitivity analysis although 5 percent anticipate using it in the near future. The lack of use of sensitivity analysis may mean that managers do not know the extent key variables must change to reverse the implication.

Inflation Rate Estimates

Since the appropriate inflation rate to be incorporated into capital budgeting analyses is based on estimates of future inflation rates, it might be enlightening to learn who originates these estimates. Respondents were asked to indicate who usually determines the estimates for future inflation rates. Responses are given in Table 6. Since many companies indicated that more than one person is involved in making the estimates, the number of companies shown in Table 6 total more than the 168 companies responding. The percentages, however, are based on the 168 respondents.

Table 6 shows that the treasurer or controller, planning staff, top management, and/or firm's economists estimate future inflation rates in most of the companies. Outside consultants are used by only 11 (7 percent) of the companies and operating management makes the estimates in only 11 (7 percent) companies. Thus, most

TABLE 6

Persons Responsible For Estimates of Inflation Rates

	Number	%
Treasurer or controller	55	33
Planning Staff	47	28
Top management	38	23
Firm's economists	30	18
Outside consultant	11	7
Operating management	11	7
Responsibility unassigned	12	7
No response	8	5

NOTE: Percentages add to more than 100% because some companies indicated the estimates are the responsibility of more than one person.

TABLE 7

United States Inflation Rates Projected By Survey Respondents

Year	Range	Median
1983	0 - 11%	7.0%
1984	4 - 12	7.0
Average 1985-1990	5 - 20	7.5

estimates of future inflation rates are determined by relatively high level management. To the extent external sources are used, they apparently play an indirect role in this key variable.

Since the estimates of inflation rates used in capital budgeting often must be made many years in advance, the survey also attempted to determine the overall rate of inflation assumed to be relevant to the firms during the remainder of this decade. Responses are shown in Table 7 and indicate that the median inflation rate is expected to be around 7 percent through 1990. Thus, respondents do not generally expect a return to double-digit inflation. However, the anticipated inflation rate is large enough to justify specific consideration in future decision analyses.

Discussion of Results

Data derived from this survey indicate that many companies are using inflation-adjusted data in making capital investment decisions. The adjustment for inflation is made primarily by increasing the discount rate when using the NPV technique and by increasing the minimum acceptable rate of return when using the IRR method. Fewer companies adjust for inflation when using the PBP method by shortening the required payback time.

One explanation for fewer companies adjusting for inflation in payback period analysis may be that since the technique is often used in conjunction with some other method, the adjustment is deferred to the more sophisticated analysis used. If the other analysis includes an inflation adjustment, the decision to invest may be based primarily on the signal given by that model and the payback period used only as supplementary information. Thus, adjustments in the payback technique for inflation may be less important than the adjustment used in the other techniques.

The method of adjusting for inflation by restating nominal dollars to constant dollars appears to be used less than the adjustments to the minimum acceptable criteria. One reason for this may be that the adjustment to constant dollars is considered more difficult. For example, revenues and expenses may need to be deflated by different factors if inflation affects inflows and outflows differently. In other words, a firm may experience different inflationary pressures in its supply markets than it does in its selling markets. Therefore, companies may find it easier to simply adjust their minimum criteria when inflation rates change.

The estimate of future inflation rates used by companies responding to this survey is primarily the responsibility of the treasurer or controller, planning staff, top management, and/or the firm's economists. Data used for decision making are not the data reported under SFAS No. 33. One explanation for this may be that decisions need to be based on information about the future while the data reported under SFAS No. 33 are based on what has happened in the past. Thus, SFAS No. 33 data may help increase the awareness of managers about the potential impact of inflation on earnings but it is not used significantly for decision making purposes. To justify its inclusion in annual reports advocates of SFAS No. 33 need to determine whether the incremental benefits from the data exceed the incremental costs of developing and reporting the data.

Summary

This paper reports the results of a survey to determine whether companies specifically consider inflation when making decisions, particularly those involving capital budgeting. Results indicate that many companies include inflation adjustments in capital investment evaluations. Although respondents do not expect inflation to reach double-digit levels again in the near future, collectively they projected a rate of approximately 7 percent through 1990 indicating that inflation will continue to be a factor in their decision-making processes. With projected annual United States Federal budget deficits approximating $200 billion for the next several fiscal years management's awareness and routine use of inflation adjustments in capital budgeting analyses may well become essential. Ω

NOTES

[1]Financial Accounting Standards Board, *Financial Reporting and Changing Prices*, Statement of Financial Accounting Standards, No. 33 (Stamford, CT: Financial Accounting Standards Board, 1979).

[2]For examples, see Moon Kim, "Inflationary Effects in the Capital Investment Process: An Empirical Examination," *The Journal of Finance* (September 1979): pp. 945-950; Gerald A. Fleischer and Arnold Reisman, "Investment Decisions Under Conditions of Inflation," *The International Journal of Production Research*, 6 (1967): pp. 87-95; Cornelius J. Casey and Michael J. Sandretto, "Internal Uses of Accounting for Inflation," *Harvard Business Review* (November-December 1981): pp. 149-156; Neil C. Churchill, "Don't Let Inflation Get the Best of You," *Harvard Business Review* (March-April 1982): pp. 6-8, 12-14, 20-23, 26; John Dearden, "Facing Facts with Inflation Accounting," *Harvard Business Review* (July-August 1981): pp. 8-12, 16; and Kenneth S. Axelson, "Facing the Hard Truths About Inflation," *Management Accounting* (June 1980): pp. 11-14.

[3]For example, the FASB held a conference on research into financial reporting and changing prices on January 6-7, 1983, in White Plains, NY. At that conference, various researchers presented the results of their studies using SFAS No. 33 data. A summary of the conference is given by the Bureau of National Affairs, Inc. in *Taxation and Accounting* (January 17, 1983): pp. G2-G7; and by Andrew Mann, "Special Report — FASB Conference on Use of Inflation-Adjusted Data," *Journal of Accountancy* (March 1983): pp. 10-13.

[4]See Debra D. Raiborn and Thomas A. Ratcliffe, "Are You Accounting for Inflation in Your Capital Budgeting Process?" *Management Accounting* (September 1979): pp. 19-22; and Jon W. Bartley, "A NPV Model Modified for Inflation," *Management Accounting* (December 1980): pp. 49-52.

[5]This is part of a larger study encompassing many aspects of capital budgeting. A complete analysis of the study is available from the authors.

[6]For elaboration of this concept, see W.J. Morse, *Cost Accounting: Processing, Evaluating and Using Cost Data*, 2nd. ed. (Reading, Mass.: Addison Wesley, 1981), pp. 243 and 291; or C.T. Horngren, *Cost Accounting: A Managerial Emphasis*, 5th ed., (Englewood Cliffs, N.J.: Prentice Hall, 1982), pp. 413-415.

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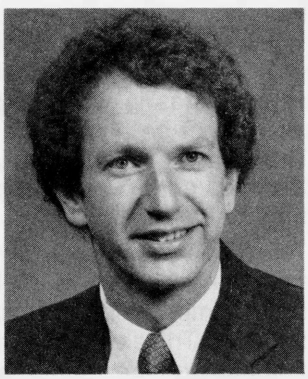

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The Statement of Changes is Changing

Increased Emphasis on Cash Flow

By Charles H. Gibson and Merry M. Kruse

In 1973 the American Institute of Certified Public Accountants issued the "Report of the Study Group on The Objectives of Financial Statements." One of the objectives included with the report related to cash flow and stated that "an objective of financial statements is to provide information useful to investors and creditors for predicting, comparing, and evaluating potential cash flows to them in terms of amount, timing and related uncertainty."[1]

In December 1980 the Financial Accounting Standards Board (FASB) issued a discussion memorandum entitled "Reporting Funds Flows, Liquidity, and Financial Flexibility." One of the reasons for undertaking this project was that there appeared to be a problem with current practice in reporting funds flow. Many of the respondents to the discussion memorandum favored the presentation of the statement of changes in financial position on a cash basis. Only a small minority of companies had used the cash basis in the past, therefore a required cash basis presentation would represent a major change in the presentation of the funds statement.

An argument in favor of presenting the funds statement on a cash basis is that cash flows are major considerations of investors and creditors. The cash flow of a company may not be obvious when the funds statement is presented on a working capital basis because changes in working capital items would not be part of the funds flow. Thus the effect of major changes in receivables and inventory on cash flow may go undetected.

In November, 1981, the FASB issued an exposure draft as a follow up to the December 1980 discussion memorandum. The exposure draft proposed focusing the statement of changes in financial position on cash flow rather than on working capital. The exposure draft is still pending as it has not been followed up by an FASB Statement.

In addition, the Securities and Exchange Commission (SEC) has taken considerable interest in this issue and released, also in 1981, Accounting Series Release No. 299 dealing with managements' cash flow discussion.

In response to the FASB Exposure Draft the Financial Executives Institute requested its member firms to consider the cash basis of reporting the funds statement. This would be a way of getting firms to change to the cash basis, when they considered this form more appropriate than the working capital form.

The FASB Discussion memorandum on "Reporting Funds Flows, Liquidity, and Financial Flexibility" contained a discussion of several ways to present the funds statement on a cash basis. Firms that elected to use the cash basis could adopt one of these forms, or a combination of these forms, or come up with their own unique presentation.

The objective of this paper is to review funds statements that are prepared using some form of a cash concept of funds as distinguished from a working capital concept. For this purpose companies that were in the 1981 Fortune 500 for industrial companies and had a calendar year end were examined. Of the 500 companies, 7 did not make their financial statements public. Of the remaining 493, 356 had a calendar year. Of these companies 87 used a cash basis, representing approximately 24.4 percent of the firms examined. A similar percentage computed for the 600 companies included in Accounting Trends and Techniques was 8.5 percent in 1979, 9.8 percent in 1980, and 22.3 percent in 1981.

Our examination centered upon focal points selected, format and summary indicators. For each of these areas, terminology was also observed.

Focal Point

Presently there is no agreement nor authoritative guideline on what the focal point should be when the cash basis is used. This allows the company to select from many alternatives that go from a straight cash basis to a broader focus.

Cash flows are major considerations of investors and creditors.

The study disclosed 8 different focal points that are used for a cash basis presentation. They are:

Description of Focal Point	Number of Companies
Cash	11
Cash and Equivalents[a]	67
Cash and Equivalents and Short-Term Borrowings[b]	4
Cash, Cash Items, and Investment Securities Maturing After One Year	1
Borrowings	1
Net Financing Requirements[c]	1
Cash and Short-Term Investments and the Change in Total Debt[d]	1
No Focal Point (All Balance Sheet Items Included in Balancing Form)	1
	87

[a]This focus is a general term for 14 different terms actually found.
[b]General term for 4 different terms found.
[c]Defined as excess of funds used in operations over funds provided.
[d]Designated as 'Net Liquidity Position' on Statement.

The majority of companies (67) used a focus of cash and equivalents, which is a general term. Actually these 67 companies used 14 differing terms, some examples of which follow: cash and short-term investments, cash and cash items, cash and temporary investments, cash and invested funds, cash and short-term securities, cash and short-term money market investments, cash and certificate of deposit, cash and time deposits, and various other similar combinations.

Examination of the balance sheets of the 11 companies reporting on a 'cash only' concept disclosed that 7 of these companies apparently held no temporary investments or did not consider them material, so it is unknown how they might have reported otherwise. The remaining 4 companies did separate the cash from other cash items for use as a focal point.

The FASB, in their Discussion Memorandum suggested three possibilities as a cash focus: cash, cash and short-term investments, and net current monetary assets. The first two have been amply used, but no companies were found using net current monetary assets. Some companies, however, included current liabilities and total debt or borrowings, but no company included a change in receivables within the focus group.

Those companies focusing on 'Borrowings,' and 'Financial requirements,' and those with no focal point have been included in the group of 87 as they all showed the changes in working capital items, other than cash items, in coming to the focus of the statement. The company with no focal point used all balance sheet accounts and showed total sources equaling total uses.

Barbara S. Thomas, a Commissioner of the Securities and Exchange Commission, noted in an article that in her opinion the focal point should be "cash and cash equivalents" and "cash equivalents could be defined as only those securities which are readily convertible to cash."[2]

In our study approximately 77 percent (67) of the companies used a focus which reasonably agrees with her recomendation. Most of these companies used an approach to cash equivalents that was reasonably close to being defined as securities which are readily convertible to cash.

Format

A number of items that pertain to format were reviewed. These items were as follows:

1. "Direct approach" vs. reconciling net income to cash flow.
2. Content of Funds from Operations.
3. Major categories in the statement other than funds from operations.
4. Items included in the major categories.
5. Placement of working capital items.
6. Placement of dividends.

"Direct Approach" vs. Reconciling Net Income to Cash Flow. On the issue of presentation format as between the "direct approach" and that which reconciles net income to cash flow, Barbara Thomas takes the side of the "direct approach." She states that "if the purpose of the cash flow statement is, as stated in the exposure draft, to provide information on cash inflows and outflows, then the weight of the evidence lies clearly on the side of the "direct approach."[3] Exhibit 1 illustrates a "direct approach." However, all of the companies in our study used the format reconciling net income to cash flow.

The FASB Discussion Memorandum indicated the following advantages of the "direct method:"

1. The principal advantage of the direct method is that it shows the actual sources and uses of a company's cash. Knowledge of where cash came from and how it was used in past periods may be useful in estimating future cash flows...

2. Another potential advantage of the direct method is that it may help to clarify the relationship between a company's net income and its cash flows. Income is the increase in net assets from an enterprise's activities. Cash flows, on the other hand, reflect the cash generated by those activities. Income and cash flows are two different effects of enterprise activities. By showing the actual sources and uses of cash, the direct method may avoid the misleading implication that income is one of the sources of cash.

Content of Funds from Operations. Probably the most important figure on the statement of changes in financial position is funds from operations. It is important that there be uniformity in the content of this figure. The variety in the content of funds from operations for the survey companies is as follows:

Description of Content	Number of Companies
Meaning Working Capital	53
Meaning Working Capital + changes in working capital items except notes payable and working capital items in the focus	16
Meaning Working Capital + changes in working capital items except notes payable and working capital items in the focus + changes in other items	17
Meaning Working Capital + changes in other items	1
	87

Fifty three of the survey companies used net earnings adjusted for items not requiring the use of funds or providing funds. This is the same content used by companies presenting the

EXHIBIT I

Statement of Cash Transactions
Direct Approach
(Operations Section Only)
For the Year Ended December 31, 1983

Cash receipts from sales	$ 9,150,000
Cash expenditures for inventories	(3,200,000)
Cash expenditures for selling expenses	(450,000)
Cash expenditures for general and administrative expenses	(1,600,000)
Cash provided by operations, before interest expense and taxes	3,900,00
Income taxes paid	(900,000)
Cash from operations before interest	3,000,000
Interest expense paid	(235,000)
Cash from operations	$2,765,000

statement on a working capital basis. Sixteen companies used this same figure adjusted for changes in working capital items except notes payable and working capital items in the focus. Seventeen companies further adjusted this amount for changes in other items. Examples of other items are additions to property, plant and equipment, foreign currency translation impact, funds used for other long-term assets and liabilities, and proceeds from sales of assets.

A number of the companies did not use the term funds from operations, but instead used cash provided from operations, internal funds generated, and net funds provided by operating activities.

Major Categories in the Statement Other Than Funds From Operations. With the working capital approach it has been accepted practice to present funds from operations and then other sources of funds. This has been followed by a listing of uses of funds. A key relationship in this presentation is the total funds from operations in relation to total funds. In the long run a company must generate funds from operations to stay in business. The authors believe the total sources and uses format would be desirable when the statement is presented on a cash basis.

Only 5 survey companies presented the statement on a pure total sources and uses format. Three other companies presented their statement on a total sources and uses format while including changes in working capital items in funds from operations or within other sources.

Twenty-three additional companies inferred that their presentation was on a total sources and uses format but an examination of their statement indicated that the statement was not on a total sources and uses format. These companies had some applications deducted within total sources and some sources deducted within applications. Examples of terms used that inferred total sources and uses format were the following:

1. Total funds provided
2. Source of funds
3. Total sources
4. Total source of funds
5. Total cash provided
6. Factors increasing cash and cash items

Of the companies using total sources and uses as categories (31), all included operations as a source.

The statements of the other 56 companies were categorized or divided up in some way showing the flows attributed to various activities. Other than sources, uses and flows from operations (which all of these statements disclosed) 36 different categories were identified as headings in the 56 statements. This represented approximately 30 different types of activities.

Some of the 31 statements showing total sources and uses also headed up sub-categories within sources or uses. For the most part these were financing shown as a source and capital improvements or dividends shown as uses.

Of the 36 categories identified, the 8 most commonly used categories and the number of companies using each are:

Category	Number of Companies
Financing Activities	43
Working-Capital Changes	14
Dividends	14
Investment Activities	13
Financing and Investment Activities	8

Each company that used the category 'Investment Activities' also used the category 'Financing Activities.' However, many using 'Financing Activities' did not use 'Investment Activities.' None of the companies using a combination category 'Financing and Investment Activities' used the separate categories.

Items Included in the Major Categories. Within the Financing, Investment, and Financing and Investment categories many different activities were shown. They fell broadly into four types: debt, capital stock and dividends, investment, and others. The various activities which were identified in these categories and which appeared on the statements of 3 or more companies are:

Financing Category:

Increase or Decrease in Debt:
- Short-term Debt
- Notes Payable
- Current portion of Long-term Debt
- Capital Leases
- Borrowings

Capital Stock & Dividends:
- Issue Common Stock
- Issue Preferred Stock
- Purchase Treasury Stock
- Stock Options
- Common Dividends
- Preferred Dividends

Investment Category:
Additions to Property, Plant & Equipment
Disposal of Property, Plant & Equipment
Addition to Investments
Capital Expenditure
Acquisition of Business
Divestment of Business
Acquisition of Non-current Assets

Financing and Investment Category:
Debt:
Long-term Debt
Short-term Debt
Notes Payable
Capital Stock & Dividends
Issue Common Stock
Issue Preferred Stock
Purchase Treasury Stock
Stock Options
Common Dividends
Preferred Dividends
Investments
Acquisitions and Divestments
Note: Miscellaneous other activities were presented in each of the above categories.

The diversity points to the difficulty inherent in allocating activities among these three categories, or separating them from operations. The FASB in their Discussion Memorandum had forseen this fundamental problem.

There was evidence that the all-financial resources approach as required by APB Opinion 19 was being used. These examples related to conversion of debt to capital stock or issuance of stock in acquisition. Nine companies specifically stated such transactions.

Placement of Working Capital Items. When the statement of changes in financial position is prepared on a working capital basis then working capital is the focus and thus the working capital items do not go into the body of the statement. A schedule of changes in working capital items is attached at the bottom of the statement. With a cash approach to the statement the focus is narrower than the working capital approach and the items that are not part of the focus go into the body of the statement. Where these items are placed within the statement can have a major effect on the statement. If changes in working capital items are part of funds from operations, then this can materially change the funds from operations. For example, if receivables and inventory increase this will be a use of funds and decrease funds from operations.

Thirty-four of the survey companies did associate changes in working capital items with operations. In no case did they associate the change in notes payable with operations. This is proper because notes payable represent an outside source of funds and therefore would distort funds from operations.

There were 8 different places where the survey companies placed working capital items that were not part of the focus. They are:

Where Located Within Statement	Number of Companies
Within operations:	
Individual items listed	27
All items netted within one figure	7
Net within sources	6
Net within uses	4
Some items in sources, some in uses	17
Individual items in sources (but not within operations)	10
Individual items in uses	8
Individual items in a separate category entitled working capital	7
Net in category 'Investments'	1
	87

On 18 statements working capital change was shown net. Of these 18 companies 11 showed a schedule of changes in individual items at the bottom of the statement, 2 showed these changes elsewhere in the report, and 5 did not show the individual changes.

Placement of Dividends. Here again wide difference in placement was found. Sixteen different locations were identified for this item on the 87 statements. The 5 most frequently used are listed and represent those used by five or more companies.

Location	Number of Companies
In Use of Funds	40
In category for Dividends	11
After (subtracted from) Funds From Operations	9
In 'Financing and Investment Activities'	7
In 'Financing Activities'	5
	72

The other 15 companies used eleven different locations. Some examples are 'Capital Transactions,' 'Changes in Capital Structure,' 'Funds invested, distributed and other,' 'To shareholders,' and at the bottom of the statement as a deduction just prior to the focal point.

Summary Indicators

The FASB Discussion Memorandum "Reporting Funds Flows, Liquidity, and Financial Flexibility" brings up the issue of presenting summary indicators as part of financial reporting. Summary indicators are computations, often in the form of ratios, such as funds based on coverage ratios and funds flows from operations per share.

Only 9 of the 87 companies used any summary indicators that were related to the Statement of Changes in Financial Position. Six of these companies disclosed one summary indicator and three disclosed two summary indicators.

Four of the summary indicators were ratios. These ratios were: (1) cash flow vs. long-term debt, (2) operating funds flow per share, (3) cash flow from operations as a percent of the total sources of funds, and (4) annual cash collections of principal as a percent of average receivables. A close examination of the ratio cash flow vs. long-term debt revealed that the content was actually working capital flow vs. long-term debt.

Seven companies used bar charts to display cash flow information. Three of these companies used the bar chart to disclose cash flow vs. capital expenditures.

Conclusion

The Financial Executives Institute encouraged its members to experiment with alternative formats and many companies responded with unique statements. The initiative that companies have taken is commendable.

The statements that have been published can serve as a valuable resource to the Financial Accounting Standards Board in determining guidelines as to the content and form of the statement of changes in financial position when the cash basis is used.

FASB Statements of Financial Accounting Concepts Numbers 1 and 2 outline objectives of financial reporting and the qualitative characteristics, respectively. The objectives include providing information that is useful for predicting the amount, timing and uncertainty of future cash flows. Among the qualitative characteristics are 'understandability' and 'comparability.'

With these ideas in mind, a few conclusions regarding our findings are presented.

It is unfortunate that no company presented the statement using the so-called "direct approach." In our opinion it would be a more meaningful one, considering the fact that cash flows from customers and to suppliers and does not flow from net income.

The fairly wide divergence in choice of focal points and formatting impair to a considerable degree the comparability characteristic. Many of the statements were excellently presented and very easily understood, yet the dissimilarity between statements leads to confusion in making comparisons.

A great deal of confusion centered around terminology. Concrete guidelines regarding such terms as funds, cash, and cash flow, would lead to statements which are far more understandable.

The Statement of Changes in Financial Position is considered to be one of three major financial statements. To have materially different content, form, and terminology on this statement from company to company is confusing and detracts from the usefulness of the statement. The experimentation stage should be concluded and the Financial Accounting Standards Board should issue a statement that gives guidance as to content, form, and terminology. Ω

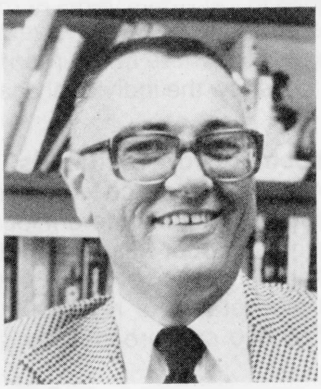
NOTES

[1]Report of the Study Group on the Objectives of Financial Statements, American Institute of Certified Public Accountants, (New York, 1973) p. 20.

[2]Barbara S. Thomas, "Deregulation and Cash Flow Reporting: One Viewpoint," *Financial Executive,* (January, 1983), p. 24.

[3]Ibid. p. 24.

[4]FASB Discussion Memorandum: *Reporting Funds Flow, Liquidity and Financial Flexibility.* Stamford: Financial Accounting Standards Board, 1980, p. 47.



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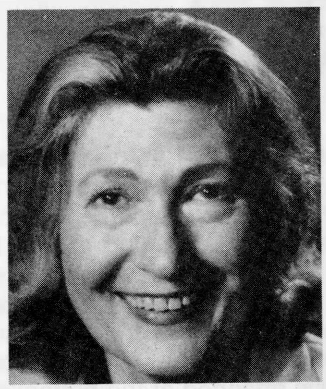

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FINANCIAL FUN

N	E	V	E	K	A	E	R	B	D	I	L	U	T	E	T	A	C	O	L	L	A	A	N
S	P	E	A	S	S	E	T	T	E	S	S	A	D	B	K	C	I	S	A	U	A	T	R
B	O	O	T	W	I	E	C	N	A	L	A	B	E	N	O	H	A	U	U	A	D	K	A
I	C	O	M	M	I	S	S	I	O	N	N	D	A	L	Y	D	T	C	R	L	E	C	E
L	M	L	A	T	I	P	A	C	H	N	O	B	L	E	T	I	C	A	C	L	F	E	C
L	A	R	R	E	F	E	D	B	L	R	I	A	H	T	I	S	U	B	C	O	A	H	O
B	E	A	P	P	R	O	P	R	I	A	T	I	O	N	U	C	D	A	A	W	U	C	M
A	V	E	R	A	G	E	C	H	D	E	A	C	U	E	N	A	O	G	O	A	L	N	P
N	E	A	P	B	O	O	S	C	R	E	M	U	E	M	N	R	R	N	B	N	T	M	T
K	G	V	E	Y	N	A	E	A	A	T	R	R	U	T	A	R	P	I	C	C	O	C	R
R	R	W	Z	T	C	U	L	L	F	E	I	R	D	S	Y	Y	Y	S	O	E	T	O	O
U	A	R	R	E	A	R	S	L	T	G	F	E	N	U	A	B	B	O	U	B	I	S	L
P	H	A	C	R	E	D	I	T	N	D	N	N	O	J	U	A	Q	L	P	C	B	T	L
T	C	C	N	C	O	N	S	O	L	U	O	T	B	D	D	C	O	C	O	D	E	T	E
G	N	I	P	E	E	K	K	O	O	B	C	P	V	A	I	K	E	E	N	D	D	A	R
C	A	L	L	A	B	L	E	R	I	S	A	N	O	I	T	A	Z	I	T	R	O	M	A

There are more than sixty common financial and accounting terms in this puzzle. The words may be vertical, horizontal, or diagonal; they may read backwards or forwards. How many can you find? HINT: All of the words in this puzzle begin with the letters A through E.

Contributed courtesy of **Robert Lake, DBA, CPA, CMA,** *Auburn University at Montgomery.*

Solution on page 30.

Dates to Remember

1985 Spring Conference	June 4-8, 1985	Hartford, CT
1985 Joint Annual Meeting	October 2-5, 1985	Los Angeles, CA
1986 Spring Conference	May 8-11, 1986	Columbus, OH

Reviews

Editor:
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In Search of Excellence, by Peters, Thomas J. and Waterman Jr., Robert H.

(New York: Harper & Row Publishers, 1982, pp. ix-xxvi, 3-349, $19.95).

In recent years the quality of American companies, their management, and their products or services have been questioned and unfavorable comparisons have been made with their foreign counterparts, Japanese firms in particular. Against such a background comes this book pointing out that there are some "excellent" firms around, firms that operate as effectively as all the foreign firms with which they have been compared.

According to the authors, several problems exist in American management, including:

- an overemphasis on quantitative methods by business schools without a counterbalance of a strong liberal arts background;
- an overemphasis on rational, analytical, goal-oriented behavior at the expense of the ability to make decisions or move the business forward;
- an overemphasis on the financial and legal areas of business while ignoring the production aspects of the enterprise;
- an overemphasis on planning techniques while deemphasizing ways of getting out a salable product;
- a failure to recognize that people are the most important resource of the firm.

These problems do not exist, or have been kept at a minimum, in the excellent companies.

Prior to surveying firms to identify the ones considered as excellent, two sets of criteria were developed. One related to sound performance over a twenty year period and was measured by six financial measures. The other related to the eight attributes which form the basis of the book and the management structure that is put forth. All fourteen companies considered excellent meet both sets of criteria. The eight attributes, and a brief discussion of each, follow:

1. *A bias for action, for getting on with it.* The excellent firms utilize various techniques for ensuring that tasks get done including experiments, ad hoc task forces, and small groups, in general any type of temporary structure that can be set up to handle a job and disbanded once its work is finished. The idea of using temporary structures is to avoid complicating the basic organizational structure and to join together the necessary expertise for developing a solution.

2. *Close to the customer.* The excellent companies have a customer orientation; they are obsessed with providing service, quality, and reliability in order to develop loyal, long-term customers. In addition, many find a niche where they excel and concentrate on that area, and thus are able to manipulate technology better, have a skill at pricing, segment their operations better, are oriented towards problem-solving, and are willing "to spend in order to discriminate." (p. 183)

Solution to Financial Fun

AAA ABACUS ACCOUNT
ACCRUAL ADJUSTMENT
ALLOCATE ALLOWANCE
AMORTIZATION ANNUITY APB
APPROPRIATION ARREARS
ASSET AUDIT AVERAGE
BALANCE BANK BANKRUPT
BASIS BILL BOND
BOOKKEEPING BOOT
BREAKEVEN BUDGET
BYPRODUCT BYTE CALL
CALLABLE CAPITAL
CARRYBACK CASH CHARGE
CHECK CIA CLOSING CMA
CODE COLLATERAL
COMMISSION COMPTROLLER
CONFIRMATION CONSOL
CONTRA COST COUNT
COUPON CPA CREDIT
CURRENT DATE DEBIT DEBT
DEFAULT DEFERRAL DILUTE
DISC DRAFT DUE EARN
EOM EOQ EPS ERISA

3. *Autonomy and entrepreneurship.* The excellent companies have continued to innovate and in order to do so they have utilized such things as decentralization, autonomy, and internal competition to foster the entrepreneurial spirit all the way down the line to the rank and file. The companies are designed to allow for innovation to occur and to tolerate the failures that are inevitable.

4. *Productivity through people.* The excellent companies treat their workers as their most important asset. They operate under a philosophy that says " 'respect the individual,' 'make people winners,' 'let them stand out,' 'treat people as adults.' " (p. 277)

5. *Hands-on value driven.* The excellent companies are clear on what they stand for and consider value shaping to be a very important process. They operate with a very narrow set of dominant beliefs and objectives — basic values, many of which relate to their customer orientation.

6. *Stick to the knitting.* If a firm must branch out or diversify, it should do so around a single skill — again the idea of finding one's niche. The excellent firms tend to generate growth internally or acquire and diversify in an experimental fashion.

7. *Simple form, lean staff.* This attribute relates to the first one. Rather than deal with a complex permanent structure, the excellent companies prefer temporary groups set up to carry out specific tasks, a mode of operation that leads to frequent re-organizations on the periphery of the organization but not at the core.

8. *Simultaneous loose-tight properties.* In the excellent companies these opposites co-exist because of the preceding seven attributes. The tight properties relate especially to the set of values held by the companies which tend to be very rigid. The tight properties also manifest themselves through the emphasis on regular, concise communication, quick feedback, a focus on realism, and, most importantly, the attention to the customer. The loose properties relate to the emphasis on autonomy, entrepreneurship and innovation and the use of positive reinforcement.

These attributes, along with some ideas from current management theory are used to present a hybrid management structure for the eighties, one based on three interrelated pillars standing for the three prime needs of firms:

1. the *stability pillar* which emphasizes the idea of a simple, basic form with dominant values, with the product-based division being considered as the best structure.

2. the *entrepreneurship pillar* which promotes the idea that "small is beautiful," (p. 315) which ties in to the use of temporary groups to handle special issues.

3. the *habit-breaking pillar* which brings in the ideas of regular reorganization and experimentation — the idea being to reorganize as soon as it becomes apparent that the old structure has become too big and bureaucratic.

The authors feel that this type of structure evolved as the matrix organization developed and the results of its use were evaluated. It is a structure closely resembling the managing systems found in many of the excellent companies. (p. 317)

The authors utilize numerous examples from the excellent companies, and others, to demonstrate how the eight attributes manifest themselves in actual situations. These companies have existed and prospered in spite of economic and management theories; they have developed management systems that fly in the face of the old rationality and beliefs. They do not believe in economies of scale but, rather, strive to stay small and simple. They do not mind sacrificing some efficiency in order to have long run prosperity. They believe in creating winners within their organizations and to do so have become masters at managing positive reinforcement. They adapt to their market and, in so doing, continue to learn.

The authors have developed an easy to read book on an interesting and important topic, a book that may be considered from two different points of view. On the one side is promotion of the idea that we need not look outside of our boundaries to find examples of companies that excel in what they do and how they do it, examples of excellent companies exist in several diverse industry groups and they give us hope for the future of American industry. On the other side is a learning aspect. We know what has worked for some companies; these lessons should be taken to heart by established companies as well as new, developing ones. The thing that is the most striking is that the eight attributes are so basic, so full of common sense, that it is hard to believe that they are not prevalent in all firms. Returning to these attributes would be analogous to returning to the basics of the three R's in education.

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INDEX

Index to Volume 46, January, 1984 through October, 1984

AUTHORS

SUBJECT

Current Value Accounting Supplement

"The Piecemeal Approach to Current Value Accounting" article would not be complete without the inclusion of three strong recommendations recently made by Donald C. Haley, Vice President-Control, Standard Oil of Ohio (American Accounting Association Annual Meeting, Toronto, August 18, 1984). These recommendations were made in the presence of FASB Vice Chairman Sprouse and Dr. Arthur R. Wyatt, presently the Managing Director-Accounting Principles for Arthur Andersen and Company and soon to be an FASB member (effective January 1, 1985). Mr. Haley's recommendations were as follows:

1. The FASB must re-commit itself to the completion of the Conceptual Framework Project; review and *probably revise* (emphasis added by speaker) the proposed SFAC "Recognition and Measurement in Financial Statements of Business Enterprises."

What direction should this revision take? His second recommendation leaves us with little doubt.

2. The FASB should pull back from its predictive value thrust to one of "full and fair disclosure" of reporting the actual results (of operations).

Mr. Haley used the phrase "predictive value" in a context that viewed "current value" per SFAS No. 33 as being a form of predictive values having limited utility. His final recommendation and a brief discussion with Haley reinforce the preceding comment about Statement 33.

3. The FASB should give greater consideration to the value of input from the preparers of financial statements and reports.

Messrs. Sprouse and Wyatt declined to take substantive issue with Mr. Haley's recommendations — perhaps meaning constructive agreement? This writer openly concurs with Mr. Haley without qualification.

R. Madison